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specimens, as all those seen from Brazil are, like the British ones, barren. Messrs. Godwin and Salvin's forthcoming *Biologia Centrali-Americana* will contain a full catalogue of the known species of plants of Central America by Mr. Hemsley.

Pringsheim's *Jahrbuch für Wissenschaftliche Botanik* for 1878, contains a paper by Woronin on Plasmodiophora, the cause of "anbury" in turnips. R. Sadebeck writes on the development of the embryo of the horsetails (*Equisetum*) and H. Banke on the germination of the *Schizæaceæ*.

In the *Botanische Zeitung*, H. Nebelung continues his spectroscopic researches on the coloring matters of some fresh water *Algæ*; A. DeBary discourses on a apogamous ferns, and the phenomena of apogamy, in general.

The French Academy has elected as corresponding members of the section of Botany, Dr. Asa Gray and Mr. Charles Darwin.

### ZOÖLOGY.<sup>1</sup>

THE RIGHT WHALE OF THE SOUTHERN EUROPEAN SEAS.—Prof. Gasco, of Genoa, has recently published, through the Royal Academy of Sciences of Naples, a full description of the external and internal characters of a right whale which was taken near Taranto, in 1877. This specimen was regarded by Dr. Capellini as representing a species new to science, which he named *Balæna tarentina*. Prof. Gasco has concluded on the other hand that it is a specimen of the *B. cisarctica* Cope, thus confirming the supposition of Prof. Cope that the species of the eastern coast of North America is identical with that of the Gulf of Biscay. The specimen is not adult, and of about the same age and size as the one captured near Philadelphia about 1864.

M. Fischer, of Paris, after a study of the remains and descriptions of the whales of the Temperate and Southern European coasts within his reach, has found the following to be related forms: The *Balæna cisarctica* Cope, and the Saw of the American coast; the Nordkaper and *Balæna biscayensis* of the European coast; the *Hunterius temminckii* Gray, of the Cape of Good Hope, and the subfossil *Hunterius swedenborgii* Lillj., of Gothland and *Balæna lananoni* of Paris. He concludes that these are not all identical, but belong to two divisions, perhaps of one species each, which are characterized, the one by the very small head, bifid first rib, and the very thick and almost cylindrical inferior extremities of the ribs; the second by a larger head, simple first and flattened following ribs. To the former belong the *Hunterii* and the *B. biscayensis*; to the latter the *A. cisarctica* and the Saw.

A NEW SPECIES OF GORILLA.—An adult female of a species of Gorilla was received in Paris about a year ago, and became the

<sup>1</sup>The departments of Ornithology and Mammalogy are conducted by Dr. ELLIOTT COUES, U. S. A.

subject of a comparative study by MM. Alix and Bouvier. These naturalists became convinced that the animal belongs to a species distinct from the *G. savagei*, which they named in a communication to the Academy of Sciences, *G. mayema*. Its principal characters are seen in the spines of the anterior cervical vertebra, which are much less elevated than in *G. savagei*, and in the greater approximation of the orbits, and prominent acute ridge of the middle line of the interorbital region. The species is smaller than the gorilla, about equaling the chimpanzee. Various other characters are mentioned by MM. Alix and Bouvier, the value of which is as yet uncertain. The cranial crests are highly developed. The typical specimen was obtained on the coast of Quilo in Congo.

THE HERPETOLOGY OF NEW GUINEA.—Dr. H. E. Sauvage has recently given in Bulletin of the Société Philomathique of Paris, a list of the reptiles of New Guinea known up to the present time. He enumerates of *Testudinata*, 3 species; of *Lacertilia*, 46 species, divided among the families as follows: *Gecconidæ*, 12; *Agamidæ*, 6; *Varanidæ*, 5; *Scincidæ*, 23. Of *Ophidia* there are 34 species, divided as follows: *Scolecophidia*, 2; *Peropoda*, 6; *Colubroidæ*, 17; *Proteroglypha*, 9. The most noteworthy facts are: First, the absence of *Solenoglyph* serpents, as in Australia (See Proceedings Academy Nat. Sciences, Philadelphia; 1859, on *Acanthophis*). Second, the genera *Erebophis* and *Chondropython*, the latter resembling some of the *Boidæ* in several respects. Third, the large number of *Scincidæ*, and (4) *Gecconidæ*; (5) the presence of *Platemys* as in Australia.—E. D. Cope.

A MONSTROUS FROG.—Mr. Jacob Stauffer, the veteran naturalist of Lancaster, Pa., sends me a drawing of a frog (*Rana palustris*) with a well developed extra hind limb or what appears from his drawing and description to be, speaking more correctly, a united pair of hind limbs, though occupying an asymmetrical position, and having their true homologies to a certain extent concealed from this cause. A sketch and remark of Mr. Stauffer's, however, show the true nature of this limb to be compound, that is, that it consists of two united halves derived by development from both sides of the body. He remarks: "The extra leg is of the same color above and below, whilst the other or normal legs are of a dirty yellowish color beneath." He further says this leg has six instead of five toes, and gives a sketch which leads me to think that the digital formula of the compound foot must be written in this manner: 5, 4, 3, 3, 4, 5, showing clearly that the limbs are fused together by their inner faces, thus bringing the outer or fourth and fifth toes to the outside, whilst the prevalence of the superior and outer dark colors, and concealment of the inner and inferior yellow tints, is just what ought to happen in the event of such union.

Altogether it is a very interesting case of the development of additional limbs, and is probably of commoner occurrence than is generally supposed. Its origin is probably to be attributed to injury or shocks, the same as that of monsters in general, as has been shown by direct experiment on eggs, and as I have been led to believe from the numerous cases where additional tails or branches arise from the original organs of lizards when broken off or injured. It may be the working of some atavistic tendency, where the organism is making an effort to return to some remote ancestral form, an explanation which will not answer, however, with respect to the lizard's tail. The theory of the archipterygium may explain it.—*Jno. A. Ryder.*

THE COCOONS OF MICROGASTER.—In examining the *Microgaster* which infests the different species of *Macrosila*, I have noticed several points in the spinning of the cocoon which are different from what are described in the very interesting note in the August number of the *NATURALIST*.

Never having studied those which are found upon the *Philampelus*, I do not know to what extent, if any, the parasites of the potato worm differ from them in structure.

First, as the worm issues from the body of its host, it does not assume the erect position even for a moment, but remains flexed, with its head ready to begin spinning as soon as the last segments of the body appear. There is, apparently, no envelope to the body, and the first active movements are those of the head as it fixes the preliminary stay threads previous to spinning in the regular loop form. This goes on precisely as described in the note referred to until the worm has finished one side, has turned upside down and is ready to complete the other half of its case. Then, instead of beginning to spin at the bottom, it quickly flexes its body, thus bringing its head back to the "toe of the slipper," from which it spins downward till the back of its host is reached and it is entirely enclosed.

The spinning of the two sides of the cocoon, then, is practically upon the same plan. In the first half the straightening of the bent body proceeds from below upwards, in the second, from above downwards. The position of the extremities is, of course, reversed in the two instances. The second position, though apparently a difficult one to assume, is nevertheless easily taken by the worm, no matter what may be its position upon the body of its host. The time required for completing this envelope is from thirty to forty-five minutes. In the further lining and completing the cocoon the worm can be seen to turn about four times before the structure becomes opaque.—*Wm. A. Buckhout.*

CETONIA INDA INJURING CORN.—This common and generally harmless beetle is reported by Mr. C. B. Smith, of Granby, Mass., to be injurious to corn. He sends us a specimen which he says,

"was found under the husk of an ear of corn. I found twenty about one ear, and have seen them about corn in several places in this garden. Several were found with their heads buried to the bottom of a kernel of corn, and bodies standing out from the ear. I think it is the same insect as is found in Pittsfield, South Hadley, Newton, Conway and other places, and called the 'corn bug' in our papers."

#### ANTHROPOLOGY.<sup>1</sup>

CRANIA UTILIZED AS CINERARY URNS IN A BURIAL MOUND IN FLORIDA.—In opening a burial mound at Cade's Pond, a small body of water situated about two miles northeastward of Santa Fe Lake, Florida, the writer found two instances of cremation, in each of which the skull of the subject, which was unconsumed, was used as the depository of his ashes. The mound contained besides a large number of human burials, the bones being much decayed. With them were deposited a great number of vessels of pottery, many of which are painted in brilliant colors, chiefly red, yellow and brown, and some of them ornamented with indented patterns, displaying not a little skill in the ceramic art, though they are reduced to fragments. The first of the skulls referred to was exhumed at a depth of two and a half feet. It rested on its apex (base uppermost), and was filled with fragments of half-incinerated human bones mingled with dark-colored dust, and the sand which invariably sifts into crania under such circumstances. Immediately beneath the skull lay the greater part of a human tibia presenting the peculiar compression known as platycnemism to the degree of affording a latitudinal index of .512; while beneath and surrounding it lay the fragments of a large number of other human bones, probably constituting an entire individual.

In the second instance of this peculiar mode in cremation, the cranium was discovered on nearly the opposite side of the mound, at a depth of two feet, and, like the former, resting on its apex. It was filled with a black mass—the *residuum* of burnt human bones mingled with sand. At three feet to the eastward lay the shaft of a flattened tibia which presents the latitudinal index of .527. Both the skulls were free from all action of fire, and though subsequently crumbling to pieces on their removal, the writer had opportunity to observe their strong resemblance to the small orthocephalic crania which he had exhumed from mounds in Michigan. The same resemblance was perceptible in the other crania belonging to this mound. The small, narrow, retreating frontal, prominent parietal protuberances, rather protuberant occipital, which was not in the least compressed, the well-defined supraciliary ridges, and the superior border of the orbits presenting a quadrilateral outline, were all particularly noticed. The lower facial bones including the maxillaries were wanting.

<sup>1</sup>Edited by Prof. ORIS T. MASON, Columbian College, Washington, D. C.